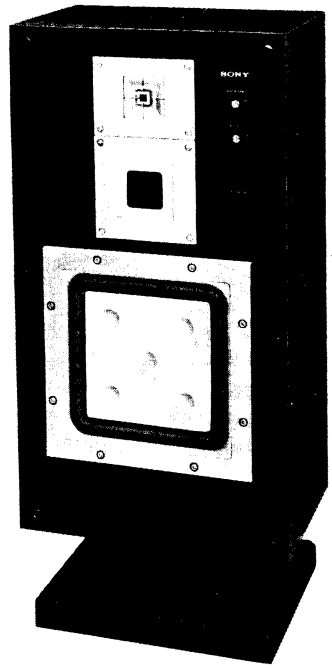
APM-77W

E Model
US Model
AEP Model
UK Model



- **Stand is optional accessory.**

SPEAKER SYSTEM

SPECIFICATIONS

Speaker System:	3-way speaker system
Speaker Units:	Woofer: 530 cm^2 (82.2 in^2), flat diaphragm
	Mid-range: 27 cm^2 (4.2 in^2), flat diaphragm
	Tweeter: 7 cm^2 (1.1 in^2), flat diaphragm
Enclosure Type:	Bass reflex
	Removable front grille
Normal Impedance:	6 Ω
Power Handling Capacity:	Normal 100 W DIN 45500
	Music 200 W DIN 45500
Sensitivity:	90 dB (1 W, 1 m)
Frequency Range:	28 – 30,000 Hz $\pm\frac{4}{8}$ dB DIN
Crossover Frequency:	700 Hz, 4500 Hz.
Controls:	Tweeter, mid-range from
	0 dB to −50 dB, continuously adjustable
Dimensions:	Approx. 405(w) x 745(h) x 325(d) mm
	16(w) x $29\frac{3}{8}$(h) x $12\frac{7}{8}$(d) inches
Weight:	Approx. 32 kg (14 lb 8 oz)
	(net, including front grille)
	Approx. 34.5 kg, 15 lbs 15 oz
	(in shipping carton)

MICROFILM

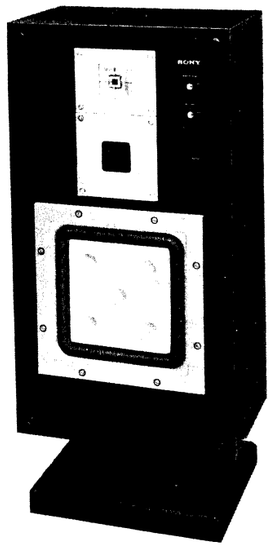
SONY®
SERVICE MANUAL

APM-77W

SH/RB/61

E Model
US Model
AEP Model
UK Model

SONY -10591



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SONY®
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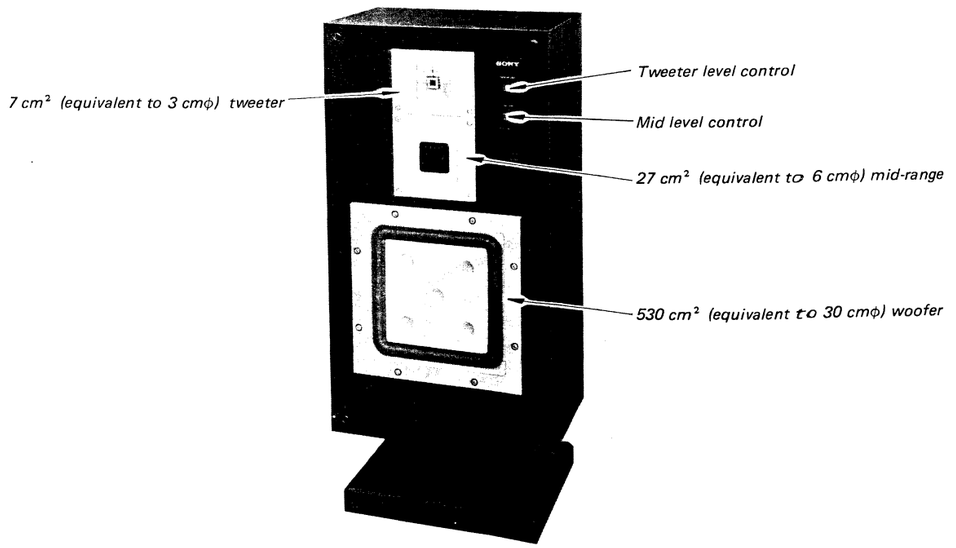
10591

FEATURES

APM (Accurate Pistonic Motion) speaker units expand the range of pistonic motion.
All three speaker units used in the APM-77W are of the flat diaphragm APM type which effectively eliminates the so-called cavity effect, or the phase cancellation of sound waves in the conventional cone type speaker. The diaphragm of each features a honeycomb sandwich structure to realize wider pistonic motion range and minimum diaphragm deformation. All three diaphragms are square shaped instead of the conventional round type. The woofer unit additionally features a 4-point driving system to completely eliminate any split vibration within the usable frequency range and to expand the pistonic motion range by a factor of three over the convertional cone type woofer. The result is clean and transparent sound reproduction with no added coloration.

Network
A crossover network of a speaker system divides the input signal into the particular frequency range required for each driver unit. The criteria required of such a network are : to reduce the interference between units, to employ carefully selected high quality parts, and not to attenuate the signal. For the rejection of cross interferences between driver units, the networks for each driver are physically separated. Oxygen-free copper wire is used for each coil winding and for all internal wiring of the network for high quality sound reproduction and minimum signal loss. In addition, oxygen-free copper boards 400 μm in thickness are employed in the tweeter and mid-range networks. For the woofer, the network is directly connected to the unit to minimize signal degradation.

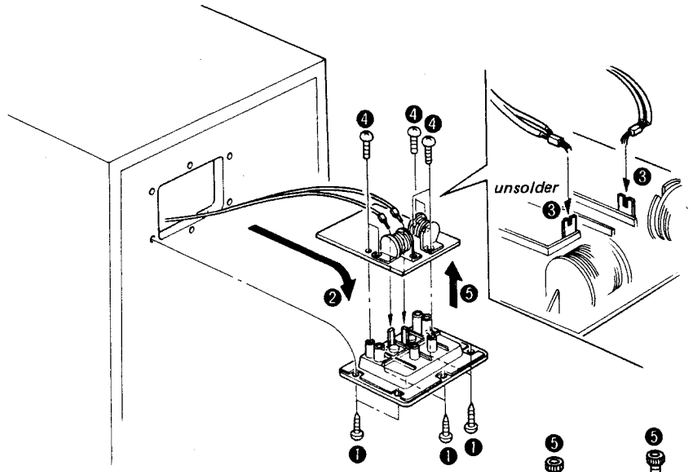
1. PARTS LOCATION


7 cm² (equivalent to 3 cmϕ) tweeter
Tweeter level control
Mid level control
27 cm² (equivalent to 6 cmϕ) mid-range
530 cm² (equivalent to 30 cmϕ) woofer

2. DISASSEMBLY

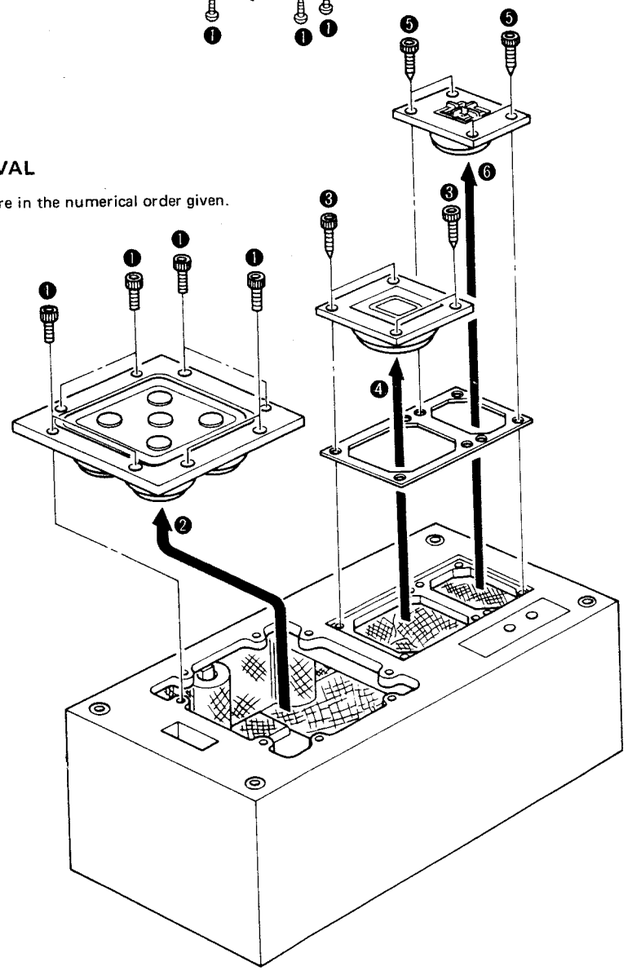
2-1. NETWORK BOARD REMOVAL

- Follow the disassembly procedure in the numerical order given.



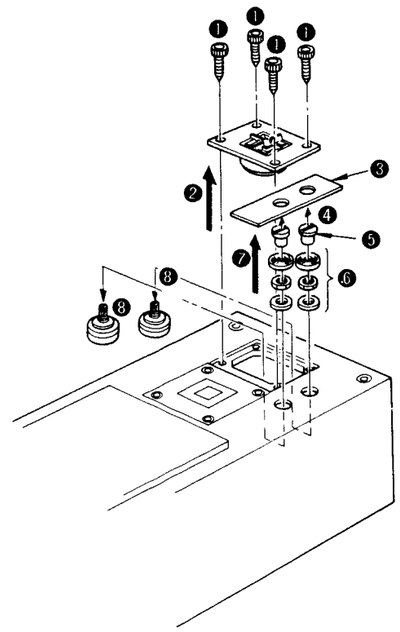
2-2. SPEAKER UNIT REMOVAL

- Follow the disassembly procedure in the numerical order given.
- Remove the front grille ass'y.
  woofer : ❶ → ❷
  mid-range : ❸ → ❹
  tweeter : ❺ → ❻



2-3. ATTENUATOR REMOVAL

- Follow the disassembly procedure in the numerical order given.



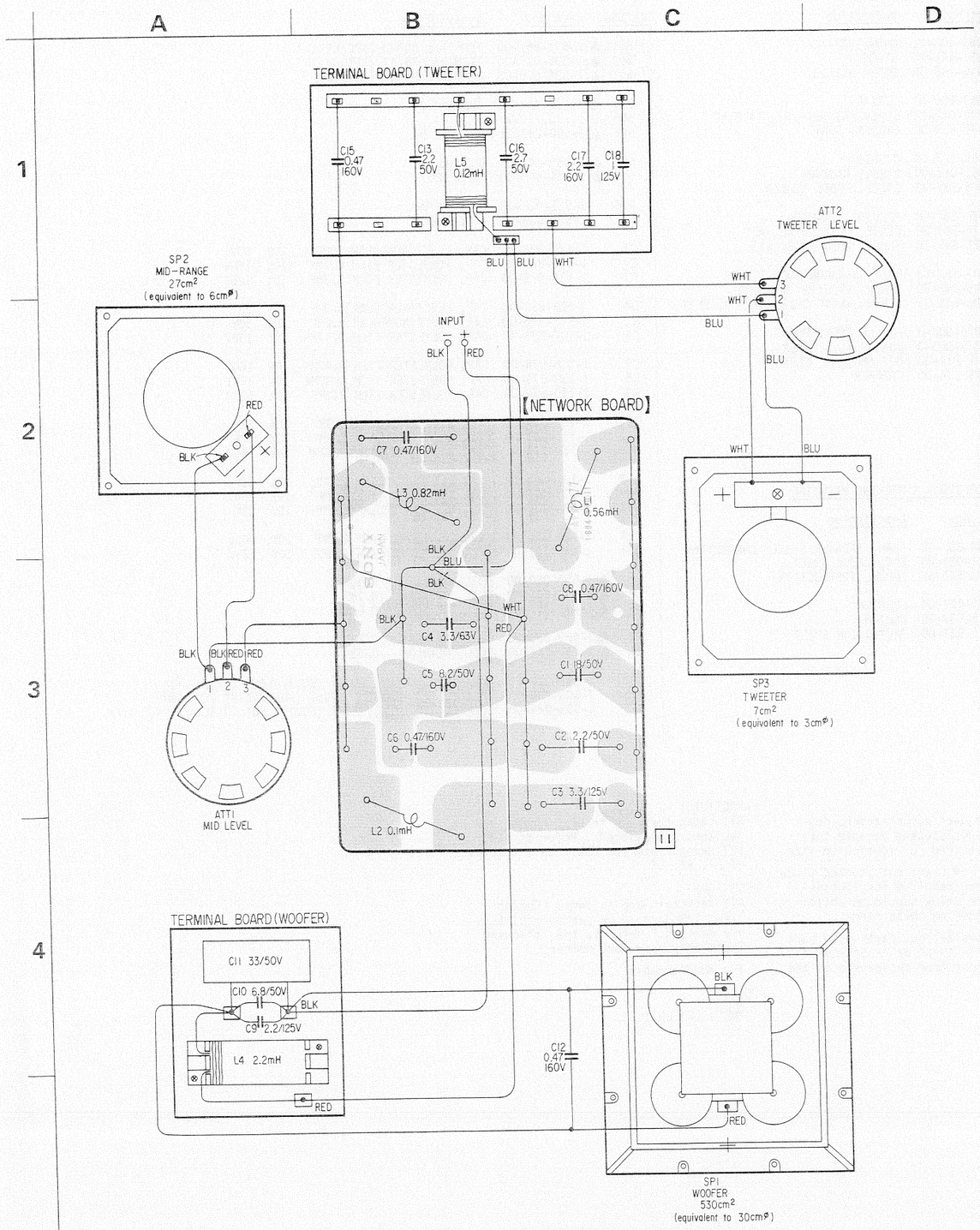
Note:

How to check voice coil of woofer.

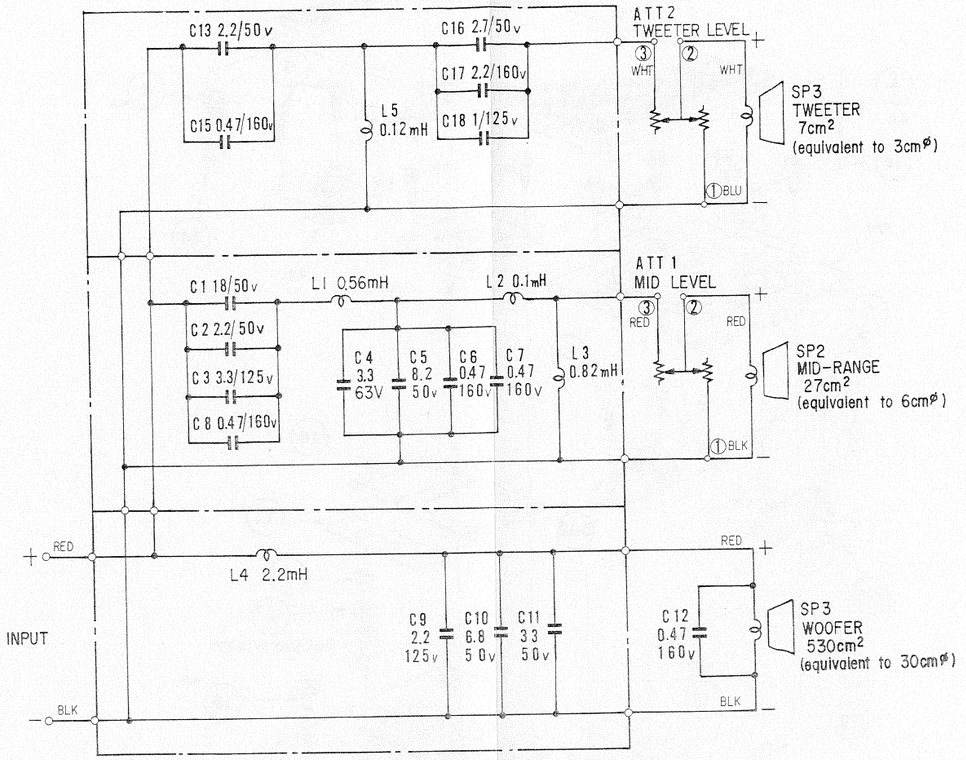
1. Measure dc resistance across speaker terminals by using VOM.
   - When voice coil is normal;
     about 4.4Ω (including dc resistance 0.2Ω of network coil)
   - When one voice coil is broken;
     about 5.8Ω (including dc resistance 0.2Ω of network coil)

   Reference data
   - When two voice coils are broken;
     about 8.6Ω (including dc resistance 0.2Ω of network coil)

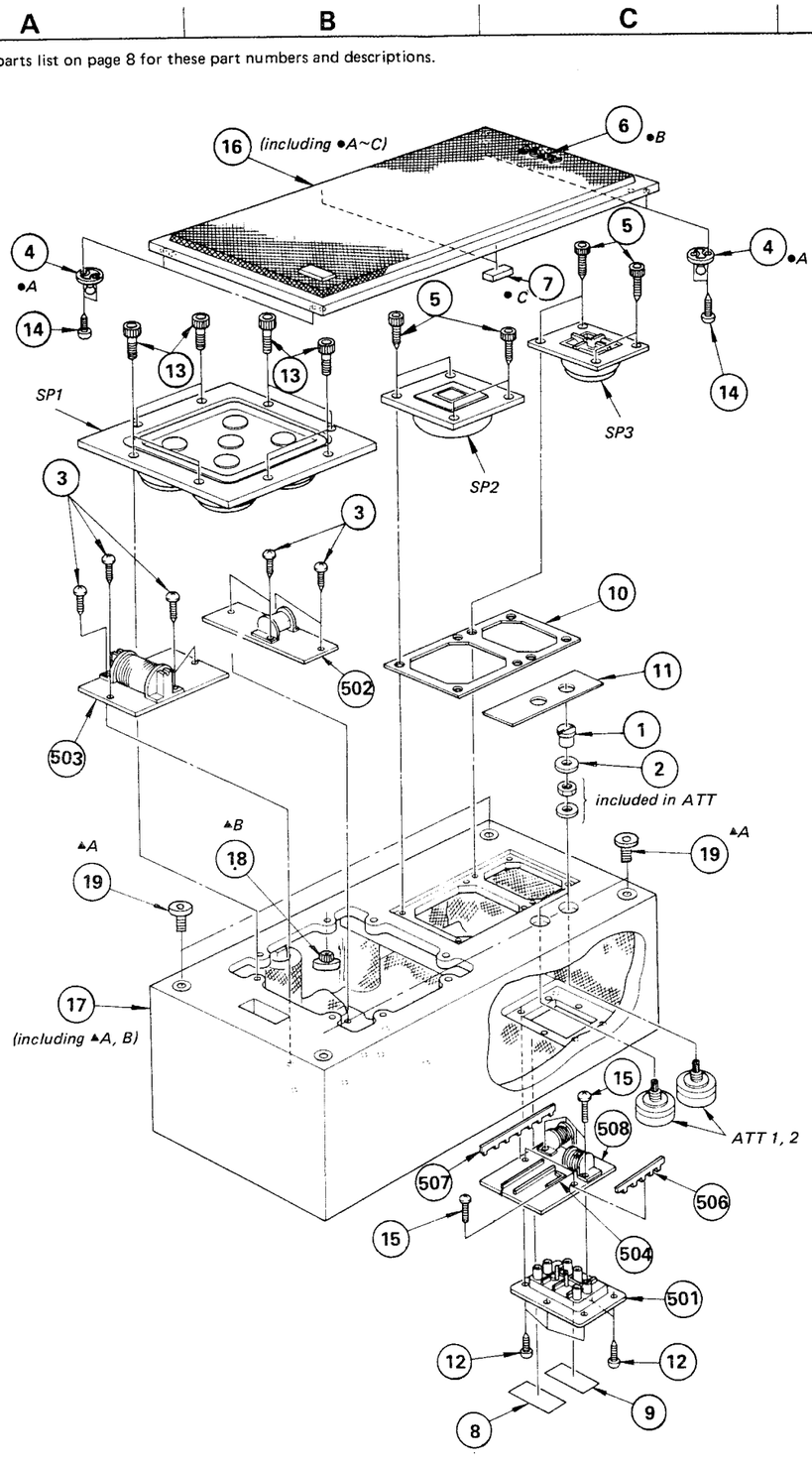
3. MOUNTING DIAGRAM



4. SCHEMATIC DIAGRAM



5. EXPLODED VIEW



GENERAL SECTION

No.	Part No.	Decription
1	3-568-604-21	KNOB, ATT
2	3-831-441-XX	SPACER
3	4-329-703-00	SCREW 3.1X13
4	4-843-806-00	STRIKE
5	4-849-042-11	SCREW (A) (DIA.5), TAPPING
6	4-849-833-00	EMBLEM, SONY
7	4-850-828-00	CUSHION
8	4-866-816-00	LABEL, CAUTION
9	♦;4-875-935-00	LABEL, MODEL NUMBER
10	♦;4-875-902-00	PACKING, TW-MID
11	4-875-925-00	PLATE, ORNAMENTAL, ATT
12	7-621-849-10	SCREW, WOOD +R 3.1X13
13	7-683-459-08	BOLT, HEXAGON SOCKET 6X25
14	7-685-148-69	SCREW +P 3X12 TAPPING
15	7-685-648-21	SCREW +BVTP 3X12 TYPE 2, SLIT
16	X-4875-904-0	GRILLE ASSY, FRONT
17	♦;X-4875-905-0	BOX ASSY, SPEAKER
18	4-837-211-00	NUT (M6), T, CLAW
19	4-849-034-00	CATCHER

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
31	1-534-687-00	CORD, SPEAKER SYSTEM CONNECTION
32	3-701-020-00	BAG, CHECK SHEET
33	3-783-543-53	MANUAL,INSTRUCTION
34	4-869-417-00	CUSHION
35	4-875-909-00	CARTON
36	4-875-927-00	PROTECTION SHEET

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
501	♦;1-536-657-00	TERMINAL BOARD (SPEAKER)		
502	♦;1-536-675-00	TERMINAL BOARD (NETWORK)		
503	♦;1-536-676-00	TERMINAL BOARD (NETWORK)		
504	♦;1-560-242-11	BUS BAR 3P		
505	.....			
506	♦;1-560-242-31	BUS BAR 5P		
507	♦;1-560-242-51	BUS BAR 7P		
508	♦;1-604-640-00	PC BOARD		
ATT1	1-511-028-00	ATTENUATOR		
ATT2	1-511-028-00	ATTENUATOR		
C1	1-123-888-00	CAP, ELECT(NONPOLAR)18MF	20%	50V
C2	1-130-347-00	CAP, POLYESTER FILM 2.2MF	10%	160V
C3	1-130-673-00	CAP, POLYESTER FILM 3.3MF	10%	125V
C4	1-123-814-00	CAP, ELECT(NONPOLAR)3.3MF	10%	63V
C5	1-123-576-00	CAP, ELECT(NONPOLAR)8.2MF	10%	50V
C6	1-130-575-00	CAP, POLYESTER FILM 0.47MF	10%	160V
C7	1-130-574-00	CAP, POLYESTER FILM 0.47MF	10%	160V
C8	1-130-575-00	CAP, POLYESTER FILM 0.47MF	10%	160V
C9	1-130-674-00	CAP, POLYESTER FILM 2.2MF	10%	125V
C10	1-123-884-00	CAP, ELECT(NONPOLAR)6.8MF	10%	50V
C11	1-123-892-00	CAP, ELECT(NONPOLAR)3.3MF	10%	50V
C12	1-130-575-00	CAP, POLYESTER FILM 0.47MF	10%	160V
C13	1-123-863-00	CAP, ELECT(NONPOLAR)2.2MF	10%	50V
C15	1-130-347-00	CAP, POLYESTER FILM 2.2MF	10%	160V
C16	1-123-733-00	CAP, ELECT(NONPOLAR)2.7MF	10%	50V
C17	1-130-347-00	CAP, POLYESTER FILM 2.2MF	10%	160V
C18	1-130-691-00	CAP, POLYESTER FILM 1.0MF	10%	125V
L1	♦;1-459-388-00	COIL, NETWORK 0.56MH		
L2	♦;1-459-363-00	COIL, NETWORK 0.1MH		
L3	♦;1-459-361-00	COIL, NETWORK 0.82MH		
L4	♦;1-459-387-00	COIL, NETWORK 2.2MH		
L5	♦;1-459-362-00	COIL, NETWORK 0.12MH		
SP1	1-503-027-00	SPEAKER (WOOFER) 530Cm² (EQUIVALENT TO 30Cmϕ)		
SP2	1-503-028-00	SPEAKER (MID-RANGE) 27Cm² (EQUIVALENT TO 6Cmϕ)		
SP3	1-503-029-00	SPEAKER (TWEETER) 7Cm² (EQUIVALENT TO 3Cmϕ)		

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (♭-△△△-△△△-XX or △-△△△△-△△△-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS
- MMH : mH, UH : μH

9-950-784-12

Sony Corporation

English
83K02121-1
Printed in Japan